



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/964,897	09/28/2001	Pirmin Rombach	45900-000663	1309

30593 7590 06/18/2003

HARNES, DICKEY & PIERCE, P.L.C.  
P.O. BOX 8910  
RESTON, VA 20195

EXAMINER

NI, SUHAN

ART UNIT	PAPER NUMBER
----------	--------------

2643

DATE MAILED: 06/18/2003

10

Please find below and/or attached an Office communication concerning this application or proceeding.

31

**Office Action Summary**

Application No.

09/964,897

Applicant(s)

ROMBACH ET AL.

Examiner

Suhan Ni

Art Unit

2643

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 April 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) 18-22 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-5, 7, 11-13 and 15-17 is/are rejected.
- 7) ☒ Claim(s) 6, 8-10 and 14 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                  | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                         | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>6</u> . | 6) <input type="checkbox"/> Other: _____.                                   |

**DETAILED ACTION**

1. This communication is responsive to the applicants' response to restriction/election requirement filed on 04/11/2003.
2. Applicant's election with traverse of claims 1-22 in Paper No. 9 is acknowledged. The traversal is on the ground(s) that the examination can be made without serious burden. This is not found persuasive because these inventions are distinct each other as mentioned in the previous office action and have acquired a separate status in the art as shown by their different classifications, and furthermore, these inventions are distinct for the reasons given in the previous office action and the search required for Group I is not required for Groups II.

The requirement is still deemed proper and is therefore made FINAL.

3. This application contains claims 18-22 drawn to an invention nonelected without traverse in Paper No. 9. A complete reply to a future final office action must include cancellation of nonelected claims or other appropriate action (37 CFR 1.144) See MPEP § 821.01.

***Drawings***

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(4) because reference character "14" has been used to designate both "a spacer chip" and "the outer ring". A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

***Claim Rejections - 35 USC § 112, 2<sup>nd</sup> Paragraph***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter, which the applicant regards as his invention.

5. Claim 13 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 13, it recites the limitation of “the first and second permanent magnet” in lines 1-2. There is insufficient antecedent basis for this limitation in the claim.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

6. Claims 1-3, 7 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Plice et al. (US-4,000,381).

Regarding claim 1, Plice et al. disclose a miniature actuator, comprising: a first and second flux generator (56) for generating a controllable first and second magnetic flux; a movable diaphragm (34); and means for generating a permanent magnetic flux, wherein the movable diaphragm is positioned between the first and second flux generator (Fig. 1) as claimed.

Regarding claims 2-3, Plice et al. further disclose the miniature actuator, wherein the first and second flux generator each comprises a conductive coil (Fig. 1) as claimed.

Regarding claim 7, Plice et al. further disclose the miniature actuator, wherein said means for generating the permanent magnetic flux (44) is symmetrically configured as claimed.

Regarding claim 11, Plice et al. further disclose the miniature actuator, wherein said movable diaphragm is made of copper as claimed.

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 4-5, 12 and 15-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Plice et al. (US-4,000,381).

Regarding claims 4 and 12, Plice et al. do not clearly teach the coils as claimed. Since providing a suitable coils with desirable coating material for an acoustic actuator is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to provide the suitable coils with desirable coating material, such as a synthetic polymer coating for the miniature actuator as an alternate choice, in order to make the actuator more durable.

Regarding claim 5, Plice et al. do not clearly teach how to connect the coils as claimed. Since providing a connection of two voice coils in same or opposite direction for an acoustic

Art Unit: 2643

actuator is very well known in the art, it therefore would have been obvious to one skilled in the art at the time the invention was made to desirably connect the coils, such as in parallel with opposite direction of the miniature actuator as an alternate choice, in order to obtain a desirable acoustic effect for certain applications.

Regarding claims 15-17, Pllice et al. do not clearly teach for how to utilize the actuator as claimed. Since Pllice et al. do not specially restrict the usage of the actuator, and suggest for utilizing the actuator for miniature electronic device (col. 1, line 62 to col. 4, line 13), it therefore would have been obvious to one skilled in the art at the time the invention was made to provide the miniature actuator for a suitable handheld device, such as a cellular phone, in order to utilize the miniature actuator.

#### ***Allowable Subject Matter***

8. Claims 6, 8-10 and 14 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Conclusion***

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to **Suhan Ni** whose telephone number is (703)-308-9322, and the number for fax machine is (703)-305-9508. The examiner can normally be reached on Monday

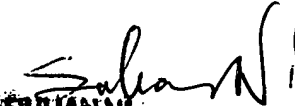
Application/Control Number: 09/964,897  
Art Unit: 2643

Page 6

through Thursday from 9:00 am to 7:30 pm. If it is necessary, the examiner's supervisor, **Curtis Kuntz**, can be reached at (703) 305-4708.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the group receptionist whose telephone number is (703) 305-3900.

Suhan Ni  
Patent Examiner  
Art Unit 2643

  
**SUHAN NI**  
**PATENT EXAMINER**

06/06/2003